

Tucson MSA TERM Report

Training & Education Resource Model

Score = average of the five percentiles, using weights 3, 3, 1, 1, 1
see notes for explanations of each column

			P e r c e n t i l e s						Labor Market Data					BLS Ed & Train Code
Rank	CIP Code	CIP Title	Score	Open- ings	Wage	ONET	Growth rate	Turn over ratio	Open- ings	Hourly Wage	ONET Score	Growth Rate %	Turn over ratio	
1	51.16	Nursing	87.6	94	89	92	74	76	634	20.96	660	9.9	2.8	7.0
2	51.06	Dental Support Services and Allied Professions	84.8	66	97	74	100	100	150	23.14	591	16.8	8.3	7.9
3	52.15	Real Estate	75.4	56	94	47	97	85	119	21.66	551	14.0	3.7	7.0
4	52.02	Business Administration, Management and Operations	74.2	77	90	84	35	45	225	21.47	617	6.7	1.7	8.0
5	51.09	Allied Health Diagnostic, Intervention, and Treatment Professions	72.0	68	66	85	82	79	155	17.06	620	10.7	2.9	7.5
6	52.99	Business, Management, Marketing, and Related Support Services, Other	71.3	61	95	35	73	65	145	22.42	516	9.7	2.3	9.1
7	46.03	Electrical and Power Transmission Installers	66.1	71	50	95	69	68	179	15.80	668	9.2	2.4	9.2
7	52.19	Specialized Sales, Merchandising, and Marketing Operations (NEW)	66.1	60	82	44	65	61	142	19.95	541	9.0	2.1	9.2
9	52.17	Insurance (NEW)	65.2	45	98	60	53	44	68	23.14	561	8.3	1.6	9.4
10	46.05	Plumbing and Related Water Supply Services	63.8	69	55	77	68	56	166	15.94	597	9.1	2.0	9.5
11	46.04	Building/Construction Finishing, Management, and Inspection	62.9	92	40	19	76	74	602	14.00	482	9.9	2.8	9.9
12	43.01	Criminal Justice and Corrections	62.7	81	68	87	18	15	291	17.15	627	5.2	1.1	9.8
13	13.13	Teacher Education and Professional Development, Specific Subject Areas	62.5	48	61	81	81	73	76	16.52	614	10.6	2.5	7.8
14	46.01	Mason/Masonry	60.4	73	42	21	90	89	180	14.04	488	12.0	4.1	9.3
14	46.02	Carpenters	60.4	87	39	27	61	77	371	13.92	497	8.8	2.9	9.1
16	51.07	Health and Medical Administrative Services	60.2	89	34	34	71	69	474	13.66	508	9.4	2.4	9.4
17	49.02	Ground Transportation	60.0	90	35	31	52	81	501	13.74	504	8.1	2.9	10.4
18	1.01	Agricultural Business and Management	59.7	52	79	69	29	47	83	19.87	574	6.4	1.8	7.7

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19	51.08	Allied Health and Medical Assisting Services	59.0	76	21	58	92	90	214	12.06	558	12.7	4.2	9.0
20	47.06	Vehicle Maintenance and Repair Technologies	58.8	58	69	76	32	39	141	18.28	594	6.5	1.4	7.3
21	52.09	Hospitality Administration/Management	56.8	26	74	94	47	71	35	19.08	664	7.5	2.5	8.0
22	51.26	Health Aides/Attendants/Orderlies	56.5	84	6	52	89	97	308	9.52	552	11.9	5.1	11.0
23	15.05	Environmental Control Technologies/Technicians	55.9	23	63	97	66	84	34	16.70	699	9.1	3.5	9.0
24	47.02	Heating, Air Conditioning, Ventilation and Refrigeration Maintenance	55.7	18	56	98	85	95	24	16.17	721	10.9	4.6	9.0
25	51.15	Mental and Social Health Services and Allied Professions	54.8	55	23	73	95	94	111	12.24	582	13.7	4.4	10.0
26	1.02	Agricultural Mechanization	54.3	27	84	56	50	48	36	20.18	557	7.7	1.8	7.0
27	19.02	Family and Consumer Sciences/Human Sciences Business Services	54.1	29	73	68	48	66	37	18.56	571	7.6	2.3	8.0
28	46.99	Construction Trades, Other	52.2	79	29	3	60	82	270	13.31	380	8.8	3.0	9.7
29	52.04	Business Operations Support and Assistant Services	50.9	97	19	15	40	55	1671	12.06	461	7.2	1.9	10.6
30	51.18	Ophthalmic and Optometric Support Services and Allied Professions	50.9	47	26	50	98	92	72	12.42	552	15.0	4.2	9.8
31	52.08	Finance and Financial Management Services	50.5	82	18	18	87	50	294	11.35	474	11.5	1.8	10.8
32	15.08	Mechanical Engineering Related Technologies/Technicians	50.4	44	65	82	26	22	65	16.82	614	6.1	1.2	7.0
33	13.12	Teacher Education and Professional Development, Specific Levels and Methods	50.4	50	27	29	94	98	83	12.63	501	13.2	6.2	7.6
34	22.03	Legal Support Services (NEW)	50.2	39	58	32	42	87	58	16.21	505	7.3	4.0	6.5
35	48.05	Precision Metal Working	49.5	65	45	39	37	40	146	14.56	527	7.0	1.4	9.6
35	52.03	Accounting and Related Services	49.5	85	32	10	31	52	319	13.59	458	6.4	1.8	10.0

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37	31.05	Health and Physical Education/Fitness	48.6	32	48	79	56	60	46	15.48	600	8.6	2.0	7.6
38	52.18	General Sales, Merchandising and Related Marketing Operations (NEW)	46.6	98	11	23	55	13	2134	10.87	490	8.4	1.0	10.8
39	9.09	Public Relations, Advertising, and Applied Communication (NEW)	46.2	15	100	42	13	18	18	25.11	540	4.1	1.1	10.0
40	15.12	Computer Engineering Technologies/Technicians (NEW)	45.7	19	81	66	8	37	24	19.89	568	3.6	1.3	6.0
41	43.02	Fire Protection	45.0	34	60	100	15	10	47	16.47	753	4.4	0.8	9.0
42	47.01	Electrical/Electronics Maintenance and Repair Technology	44.6	37	76	11	16	35	56	19.13	460	5.0	1.3	9.0
43	1.06	Applied Horticulture/Horticultural Business Services	44.4	95	10	8	44	34	779	10.86	448	7.4	1.3	10.8
44	30.16	Accounting and Computer Science (NEW)	43.0	6	77	71	11	53	12	19.46	575	4.0	1.9	6.0
45	12.05	Culinary Arts and Related Services	42.8	100	0	16	58	11	2898	7.41	461	8.7	0.9	10.7
46	51.1	Clinical/Medical Laboratory Science and Allied Professions	42.7	21	37	63	84	63	30	13.89	562	10.7	2.3	7.5
47	47.03	Heavy/Industrial Equipment Maintenance Technologies	42.1	42	31	90	39	32	63	13.41	639	7.1	1.3	9.9
48	19.07	Human Development, Family Studies, and Related Services	41.8	74	2	45	45	58	188	8.03	550	7.4	2.0	10.3
49	50.03	Dance	41.1	1	92	26	63	3	11	21.54	495	8.9	0.6	8.0
50	15.07	Quality Control and Safety Technologies/Technicians	41.0	40	44	65	23	31	61	14.55	566	5.6	1.3	10.0
51	15.13	Drafting/Design Engineering Technologies/Technicians (NEW)	40.8	1	87	89	10	5	11	20.34	630	3.9	0.7	7.0
52	15.11	Engineering-Related Technologies	39.3	12	52	54	78	28	14	15.84	555	10.0	1.2	10.0
52	45.07	Geography and Cartography	39.3	12	52	54	78	28	14	15.84	555	10.0	1.2	10.0
54	15.03	Electrical Engineering Technologies/Technicians	37.9	4	85	61	3	8	12	20.32	562	3.1	0.8	6.0

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55	19.05	Foods, Nutrition, and Related Services	32.4	53	16	24	34	26	108	11.12	491	6.7	1.2	8.6
56	25.03	Library Assistant	31.3	4	71	48	6	2	12	18.55	551	3.5	0.4	11.0
57	11.03	Data Processing	30.5	24	47	40	5	16	34	15.39	532	3.1	1.1	8.6
58	13.15	Teaching Assistants/Aides	30.1	63	5	6	19	42	145	9.01	436	5.2	1.5	11.0
59	10.03	Graphic Communications (NEW)	19.5	31	13	5	21	19	38	11.00	383	5.3	1.2	10.3
59	12.04	Cosmetology and Related Personal Grooming Services	19.5	35	8	37	2	6	53	10.28	520	2.9	0.8	7.0
61	48.07	Woodworking	16.9	10	24	2	27	22	13	12.42	368	6.3	1.2	9.0
62	11.06	Data Entry/Microcomputer Applications (NEW)	12.9	8	15	0	24	24	12	11.01	308	5.7	1.2	10.0
63	1.03	Agricultural Production Operations	7.9	16	3	13	0	0	23	8.24	460	1.7	0.3	11.0

Explanations for Each Column of the TERM Report		
Column		Explanation
A	Rank	This is the rank of the CIP (Classification of Instructional Program) by percentile score as shown in column D. Tie scores get tie ranks. Sometimes scores appear to be a tie, but if carried out to more decimal places, are not. Such CIPs are not assigned tie ranks.
B	CIP Code	CIP (Classification of Instructional Programs) code as assigned by the U.S. Department of Education. See Sources note below for more details.
C	CIP Title	The title of the training program, as assigned by the U.S. Department of Education Classification of Instructional Programs.
D	Score	The score is a weighted average of columns E through I. The weights used are 3, 3, 1, 1, 1, respectively. See Calculation Method note below for more details.
E-I	Percentiles	These 5 columns are the percentile scores of the data in columns J through N. Percentiles scores are used to compute different types of data in the model. For example, wages in dollars and growth in percentages. Tie scores produce tie percentiles.
J	Openings	The projected number of openings expected per year for the occupations within this CIP. If an occupation is contained in more than one CIP, its openings are distributed evenly among those CIPs. Projected openings based on 2004-2006 occupation projections.
K	Hourly Wage	The average of the wages of the occupations contained in this CIP, weighted by the number of openings in each occupation. Wages based on 2004 Occupational Employment Statistics (OES) survey.
L	O*NET Score	O*NET is an acronym for the Occupational Information Network (http://www.onetcenter.org/). This data is a measure of the skills, knowledge, and abilities required for the occupations within this CIP, weighted by the number of openings in each occupation. The numerical score for each comparative occupational descriptor in the O*NET Knowledge, Skills, and Abilities data files were summed for each occupation. See Sources note below for more information.
M	Growth Rate	The two-year projected rate of growth in employment of the occupations in this CIP, weighted by the number of openings in each occupation. This number could be negative but usually is not. Occupational growth rate is from the 2004-2006 Occupational Projections produced by the AzDES Research Administration.
N	Turnover Ratio	This is the projected number of annual openings due to growth divided by the projected number of annual openings due to replacement (like retirements, quits, promotions, etc.). Higher ratios indicate lower turnover. Based on the 2004-2006 occupational projections data.
O	BLS Education & Training Code	The job training and educational levels as assigned by the Bureau of Labor Statistics (BLS). See detailed descriptions of the BLS codes on page two of these notes. Note that a higher code number indicates a lower amount of education or training time.

Calculation method	
1	Hourly wages were calculated by dividing annual wages by 2080.
2	The O*NET score was first calculated by occupation using the SOC (Standard Occupational Code). The scores for each 6-digit SOC were calculated by averaging the scores for the 8-digit O*NET SOC's that comprise each 6-digit SOC.
3	The field of occupations was restricted to those whose BLS Training and Educational code was between 6 and 11 (occupations which require 2 years of training or less.) Note that the lower the training and educational time requirement, the higher the code numbers (see below).
4	Scores by CIP (Classification of Instructional Programs) (except openings) were calculated by taking an openings-weighted average of the occupations in the CIP. For occupations appearing in more than one CIP, openings were evenly distributed among the CIP.
5	Percentiles were calculated for each statistic shown. In case of a tie, the same percentile was assigned to all CIP's involved in the tie.
6	The following formula determined the score for each CIP: $(3 \times \text{openings percentile} + 3 \times \text{wage percentile} + \text{O*NET percentile} + \text{growth percentile} + \text{ratio percentile}) / 9$
BLS (Bureau of Labor Statistics) Education and Training Codes	
1-5	Bachelor's degree and higher educational levels were not used for this project.
6	Associate degree
7	Post-secondary vocational training
8	Work experience in related occupation
9	Long-term on-the-job training
10	Moderate-term on-the-job training
11	Short-term on-the-job training
Sources	
1	Openings and wage data are produced by the Arizona Department of Economic Security, Research Administration, in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics. Wages are from the 2004 Occupational Employment Statistics (OES) survey, and openings are from the 2004-2006 occupational employment projections.
2	For the O*Net score, the O*Net database version 8.0 was used. (www.onetcenter.org/database.html)
3	CIP / SOC (Standard Occupational Classification) crosswalk source: National Crosswalk Service Center, Department of Education, Des Moines IA 50319, Telephone: 515-242-5034, E-mail: NCSC@ed.state.ia.us .
4	The education and training codes are from the Bureau of Labor Statistics (BLS) website at ftp://ftp.bls.gov/pub/special.requests/ep/optddata/optd0212.txt
Questions and Comments	
	Direct questions or comments to Rick Van Sickle, 602-542-6481, John Graeflin, 602-542-6492, or Don Wehbey, 602-542-3686, at Research Administration, Arizona Department of Economic Security.